

We claim:

1. A waste disposal system with flexible tubing comprising:

a container defining a waste chamber for receiving waste;

a lid connected to the container and movable between an open condition, in which access to the container is provided, and a closed condition, in which the container is covered;

an iris comprising a first disk, a second disk and a web, wherein the first disk and the second disk are ring shaped, parallel and coaxial, wherein the web connects the first disk and the second disk, and wherein the iris can rotate from an open position, in which waste can flow through the iris, to a closed position, in which flow of waste through the iris is hindered;

a cartridge of flexible tubing removably situated in the container, wherein the flexible tubing extends from the cartridge through the iris into the waste chamber and is arranged to receive waste therein; and

a guide system, causing the iris move from the open position to the closed position by generating a relative rotation between the first disk and the second disk, further causing the iris to twist and cinch the flexible tubing and to enclose the held waste, and still further causing the iris to displace in a direction opposite to the lid and to carry the held waste into the waste chamber.

2. The waste disposal system with flexible tubing of claim 1, wherein the web comprises a plurality of string segments.

3. The waste disposal system with flexible tubing of claim 2, wherein the string segments are parallel.

4. The waste disposal system with flexible tubing of claim 3, wherein the angular distance between the attachment points of one of the string segments on the first disk and on the second disk is larger than the angular distance between the attachment point of one of the string segments on the first disk and the attachment point of the consecutive string segment on the first disk.

5. The waste disposal system with flexible tubing of claim 4, wherein the iris moves from the open position to the closed position when the relative rotation of the first disk and of the second disk is approximately 110 degrees.

6. The waste disposal system with flexible tubing of claim 1, wherein:  
the guide system comprises a cylindrical structure housing the iris;  
the cylindrical structure comprises a slot system and a groove system;  
the slot system comprises one or more slots essentially parallel to the common axis of the first disk and of the second disk, each of the one or more slots housing a first pin connected to the first disk;

the groove system comprises one or more grooves running in a spiral pattern along the cylindrical structure, each of the one or more second grooves housing a second pin connected to the second disk; and

each of the first pins is connected to the lid, wherein a movement of the lid from the open position to the closed position causes a movement of the first pins along the slots and a movement of the iris in a direction opposite to the lid, and wherein the movement of the first disk causes a movement of the second pins in the direction of the one or more grooves and the closing of the iris.

7. The waste disposal system with flexible tubing of claim 6, further comprising retainers connecting the first disk and the second disk.

8. The waste disposal system with flexible tubing of claim 1, further comprising one or more springs connected to the iris, the one or more springs being tensed when the iris moves in the direction of the lid and returning to their rest position when the iris moves in the direction opposite to the lid.

9. The waste disposal system with flexible tubing of claim 1, further comprising a door on the wall of the container for the removal of the flexible tubing.

10. The waste disposal system with flexible tubing of claim 1, further comprising a drawer in the container for the removal of the flexible tubing.

11. The waste disposal system with flexible tubing of claim 1, further comprising an actuator connected to the lid and causing the lid to displace.

12. The waste disposal system with flexible tubing of claim 11, wherein the actuator comprises a magnetic solenoid.

13. The waste disposal system with flexible tubing of claim 11, wherein the actuator comprises an electric motor.

14. The waste disposal system with flexible tubing of claim 11, wherein the actuator is activated through a sensor.

15. The waste disposal system with flexible tubing of claim 11, wherein the actuator is activated through a hand switch.

16. The waste disposal system with flexible tubing of claim 11, wherein the actuator is activated through a pedal.

17. The waste disposal system with flexible tubing of claim 1, further comprising a fastening device that fastens the flexible tubing approximately in the area where the flexible tubing is cinched.

18. The waste disposal system with flexible tubing of claim 17, wherein the fastening device comprises a heat-sealing device.

19. The waste disposal system with flexible tubing of claim 17, wherein the fastening device fastens the flexible tubing with a mechanical clasp.

20. A process for disposing waste comprising the steps of:  
providing a container comprising a lid, a flexible tubing, and an iris comprising two concentric and parallel disks connected by a web;  
placing waste into the flexible tubing;  
causing the disks of the iris to rotate angularly in relation to each other, thereby enclosing the held waste, and  
causing the iris to displace in a direction opposite to the lid, thereby moving the held waste into the container.

21. A process for disposing waste comprising the steps of:

providing a container comprising a lid, a flexible tubing, and an iris comprising two concentric and parallel disks connected by a web;

placing waste into the flexible tubing; and

causing the disks of the iris to rotate angularly in relation to each other, thereby enclosing the held waste, and simultaneously causing the iris to displace in a direction opposite to the lid and to move the held waste into the container.